

Title (en)

Power tool with a torque limiter using only rotational angle detecting means

Title (de)

Kraftgetriebenes Werkzeug mit Drehmomentbegrenzung unter ausschliesslicher Benutzung eines Drehwinkelsensors

Title (fr)

Outil motorisé à limitation de couple n'utilisant qu'un moyen de détection de déplacement angulaire

Publication

EP 1447177 B1 20110420 (EN)

Application

EP 04002453 A 20040204

Priority

- JP 2003028709 A 20030205
- JP 2003036402 A 20030214

Abstract (en)

[origin: EP1447177A2] Power tool (11) may include a motor and oil pulse unit (22) that generates an elevated torque. Oil pulse unit (22) may be coupled to the motor and have output shaft (18). When load acting on output shaft (18) is less than a predetermined value, rotating torque generated by the motor is directly transmitted to output shaft (18). When the load acting on output shaft (22) exceeds the predetermined value, an elevated torque is generated by oil pulse unit (22) and applied to output shaft (18). Output shaft (18) may be connected to load shaft (12). A socket may be attached to the distal end of load shaft (12). Power tool (11) may further include detecting device (20) for detecting change in rotational angle of output shaft (18) and the direction of rotation thereof, and a control device. The detecting device (20) may output signals corresponding to a state of output shaft (18) to the control device. The control device may store the state of output shaft (18) at predetermined interval. Preferably, the control device may further determine a generating time, at which oil pulse unit (22) generates the elevated torque, based upon the state of output shaft (18).

IPC 8 full level

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CPC (source: EP US)

B25B 21/02 (2013.01 - EP US); **B25B 23/1453** (2013.01 - EP US); **B25B 23/1475** (2013.01 - EP US)

Cited by

RU2472610C2; EP1802845A4; DE102006021329A1; CN104308811A; ITMO20110287A1; US11396092B2; EP2495076A1; EP2239099A3; US8640789B2; US10160049B2; US9233458B2; US10589413B2; WO2009136664A1; WO2008015661A3; WO2013068892A1; US11491616B2; US10052733B2; US10418879B2; US8196673B2; US10668614B2; US11602832B2; US11260517B2; US11707831B2; US10615670B2; US11784538B2; TWI395641B

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DOCDB simple family (application)

EP 04002453 A 20040204; DE 602004032279 T 20040204; EP 10176906 A 20040204; US 77209404 A 20040204